

ed May 28 14:43:26 2003

GenCore version 5.1.4.P5_4578
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OM protein - protein search, using sw model

Run on: May 19, 2003, 16:32:11 ; Search time 13 Seconds

(without alignments)
749,764 Million cell updates/sec

Title: US-09-847-102a-68

Sequence: 1 MARDPSPAPSLILLIAQL.....PNCAPCYQPSFSADERTFA 235

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 112892 seqs, 41476328 residues

Total number of hits satisfying chosen parameters: 112892

Minimum DB seq length: 0
Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%

Maximum Match 100%
Listing first 45 summaries

Database: SwissProt_40.1

Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	1310	100.0	585	1 FZD5_HUMAN	013467 homo sapien
2	1143	87.3	577	1 FZD5_MOUSE	096d0 mus musculu
3	825.5	63.0	559	1 FZD5_XENLA	P58421 xenopus lae
4	824	62.9	694	1 FZD8_HUMAN	09h461 homo sapien
5	823.5	62.9	685	1 FZD8_MOUSE	061091 mus musculu
6	802	61.2	581	1 FZD8_XENLA	093774 xenopus lae
7	621	47.4	694	1 FZD2_DROME	09vxx3 drosophila
8	477	36.4	565	1 FZD2_HUMAN	014332 homo sapien
9	476	36.3	570	1 FZD2_MOUSE	09j1p6 mus musculu
10	466	35.6	570	1 FZD2_RAT	008464 rattus norv
11	457	34.9	574	1 FZD7_HUMAN	061090 mus musculu
12	440.5	33.6	572	1 FZD7_MOUSE	09pue6 xenopus lae
13	438.5	33.5	551	1 FZD7_XENLA	057328 gallus gall
14	431	32.9	592	1 FZD1_CHICK	070421 mus musculu
15	422	32.2	642	1 FZD1_MOUSE	093728 gallus gall
16	421	32.1	523	1 FZD2_CHICK	091a06 gallus gall
17	414.5	31.6	568	1 FZD1_HUMAN	09u338 homo sapien
18	411	31.4	647	1 FZD7_CHICK	057329 gallus gall
19	405.5	31.0	549	1 FZD7_MOUSE	09pue6 xenopus lae
20	401	30.6	559	1 FZD1_XENLA	091sms xenopus lae
21	398	30.4	641	1 FZD1_RAT	008465 rattus norv
22	394.5	30.1	591	1 FZD9_HUMAN	000144 homo sapien
23	394.5	30.1	592	1 FZD9_MOUSE	09u1w2 mus musculu
24	384	29.3	581	1 FZ10_HUMAN	09u1w2 homo sapien
25	372	28.4	325	1 FZB_HUMAN	092765 homo sapien
26	371	28.3	583	1 FRIZ_DROYI	092765 drosophila
27	370.5	28.3	581	1 FRIZ_DROME	P18537 drosophila
28	368	28.1	586	1 FZD4_XENLA	096eb5 xenopus lae
29	367	28.0	323	1 FZB_MOUSE	P97401 mus musculu
30	366	27.9	325	1 FZB_BOVIN	095117 bos taurus
31	360	27.5	580	1 FZD8_XENLA	097742 xenopus lae
32	351	26.8	585	1 FZ10_CHICK	09pwh2 gallus gall
33	309	23.6	523	1 FZD4_XENLA	09p162 xenopus lae

ALIGNMENTS

RESULT 1	ID	Score	Expect	Ident	Accession	Description
1	FZD5_HUMAN	308	23.5	537	1 FZD4_HUMAN	09u1v1 homo sapien
2	FZD5_HUMAN	304.5	23.2	666	1 FZD3_MOUSE	061086 mus musculu
3	FZD5_HUMAN	302.5	23.1	525	1 FZD4_CHICK	091a05 gallus gall
4	FZD5_HUMAN	300.5	22.9	538	1 FZD4_RAT	092h05 rattus norv
5	FZD5_HUMAN	299.5	22.9	537	1 FZD3_MOUSE	061088 mus musculu
6	FZD5_HUMAN	297	22.7	666	1 FZD3_HUMAN	09npg1 homo sapien
7	FZD5_HUMAN	293.5	22.4	664	1 FZD3_XENLA	042579 xenopus lae
8	FZD5_HUMAN	284	21.7	705	1 FRZ4_DROME	09nwl1 drosophila
9	FZD5_HUMAN	282	21.5	706	1 FZD6_HUMAN	060353 homo sapien
10	FZD5_HUMAN	271	20.7	709	1 FZD6_MOUSE	061089 mus musculu
11	FZD5_HUMAN	261	19.9	581	1 FRZ3_DROME	077438 drosophila
12	FZD5_HUMAN	218.5	16.7	1113	1 COR1_MOUSE	092319 mus musculu

RESULT 1
FZD5_HUMAN STANDARD; PRT; 585 AA.
AC 013467;
DT 15-JUN-2002 (Rel. 41, Created)
DT 15-JUN-2002 (Rel. 41, Last sequence update)
DE Frizzled 5 precursor (Frizzled-5) (Fz-5) (hfe25) (FZ5).
GN FZD5 OR HFZ5.
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX NCBI_TaxID=9606;
[1]
RP SEQUENCE FROM N.A.
RC TISSUE=Retina;
RA MEDLINE=96224032; PubMed=8626800;
RA Wang Y., Macke J.P., Abella B.S., Andreasen K., Worley P.,
Gilbert D.J., Copeland N.G., Jenkins N.A., Nathans J.,
"A large family of putative transmembrane receptors homologous to the
product of the Drosophila tissue polarity gene frizzled,"
J. Biol. Chem. 271:4468-4476(1996).
[2]
RN SEQUENCE FROM N.A.
RP MEDLINE=21301556; PubMed=11408929;
RC Satoch T., Hirai M., Katoh M.,
"Molecular cloning and characterization of human Frizzled-5 gene on
chromosome 2q33.3-q34 region,"
Int. J. Oncol. 19:105-110(2001).
[3]
RN SEQUENCE OF 273-331 FROM N.A.
RP TISSUE=Esophageal carcinoma;
RC MEDLINE=96374323; PubMed=9707618;
RA Tanaka S., Akiyoshi T., Mori M., Wands J.R., Sugimachi K.,
"A novel frizzled gene identified in human esophageal carcinoma
mediates APC/beta-catenin signal,"
Proc. Natl. Acad. Sci. U.S.A. 95:10164-10169(1998).
[4]
RN COUPLING TO BETA-CATENIN PATHWAY.
RP MEDLINE=97207341; PubMed=9054360;
RC He X., Saint-Jeannet J.P., Wang Y., Nathans J., Varmus H.,
"A member of the Frizzled protein family mediating axis induction by
Wnt-5A,"
Science 275:1652-1654(1997).
-1- FUNCTION: Receptor for Wnt proteins. Most of frizzled receptors
are coupled to the beta-catenin canonical signaling pathway, which
leads to the activation of dishevelled proteins. Inhibition of
GSK-3 kinase, nuclear accumulation of beta-catenin and activation
of Wnt target genes. A second signaling pathway involving PKC and
calcium fluxes has been seen for some family members, but it is
not yet clear if it represents a distinct pathway or if it can be
integrated in the canonical pathway, as PKC seems to be required
for Wnt-mediated inactivation of GSK-3 kinase. Both pathways seem
to involve interactions with G-proteins. May be involved in
transduction and intercellular transmission of polarity
information during tissue morphogenesis and/or in differentiated

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Db      61  DEAGLVHWFMPVIVEIQCSPDRLFFCLMTYPICLPDKPLPPCRSVCERAKGCSPLM 120
Qy      121  ROYGFAMPWRMSCDRLPYLGRDAEVLCDMDYRSEATTPPPRPPAKPLLPBPAPASGG 180
Db      121  ROYGFAMPWRMSCDRLPYLGRDAEVLCDMDYRSEATTPPPRPPAKPLLPBPAPASGG 180
Qy      181  ECPAGGPFVCKREPPVPLIKSHPLYNKVRIGQVPCNACVCPSPFSADERTPA 235
Db      181  ECPAGGPFVCKREPPVPLIKSHPLYNKVRIGQVPCNACVCPSPFSADERTPA 235

RESULT 2
FZD5_MOUSE
ID      FZD5_MOUSE      STANDARD;      PRT;      577 AA.
AC      Q9EBD0; 008975;
DT      15-JUN-2002 (Rel. 41, Created)
DT      15-JUN-2002 (Rel. 41, Last sequence update)
DT      15-JUN-2002 (Rel. 41, Last annotation update)
DE      Fizzled 5 precursor (Fizzled-5) (Fz-5) (NFZ5).
GN      FZD5.
OS      Mus musculus (Mouse).
OC      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC      Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Mus.
OC      NCBI_TaxId=10090;
RN      [1]
RP      SEQUENCE FROM N.A.
RC      STRAIN=C57BL/6N; TISSUE=Gut;
RX      PubMed=11092808;
RA      Ishikawa T., Tamai Y., Zorn A.M., Yoshida H., Seidln M.F.,
RA      Nishikawa S.-I., Taketo M.M.;
RT      "Mouse Wnt receptor gene Fzd5 is essential for yolk sac and placental
RT      angiogenesis."
RL      Development 128:25-33 (2001).
RN      [2]
RP      SEQUENCE OF 207-296 FROM N.A.
RC      STRAIN=C57BL/6; TISSUE=Prostate;
RA      Johnson M.A., Greenberg N.M.;
RL      Submitted (AUG-1997) to the EMBL/GenBank/DBJ databases.
RN      [3]
RP      TISSUE SPECIFICITY.
RX      MEDLINE=96224032; PubMed=8626800;
RA      Wang Y., Macke J.P., Abella B.S., Andreasson K., Worley P.,
RA      Gilbert D.J., Copeland N.G., Jenkins N.A., Nathans J.;
RT      "A large family of putative transmembrane receptors homologous to the
RT      product of the Drosophila tissue polarity gene frizzled.";
RL      J. Biol. Chem. 271:4468-4476 (1996).
CC      -1- FUNCTION: Receptor for Wnt proteins. Most of frizzled receptors
CC      are coupled to the beta-catenin canonical signaling pathway, which
CC      leads to the activation of dishevelled proteins, inhibition of
CC      GSK-3 kinase, nuclear accumulation of beta-catenin and activation of
CC      Wnt target genes. A second signaling pathway involving PKC and
CC      calcium fluxes has been seen for some family members, but it is
CC      not yet clear if it represents a distinct pathway or if it can be
CC      integrated in the canonical pathway, as PKC seems to be required
CC      for Wnt-mediated inactivation of GSK-3 kinase. Both pathways seem
CC      to involve interactions with G-proteins. May be involved in
CC      transduction and intercellular transmission of polarity
CC      information during tissue morphogenesis and/or in differentiated
CC      tissues. Plays a role in yolk sac angiogenesis and in placental
CC      vascularization. Binds to Wnt2, Wnt10B, Wnt5A, but not to Wnt2B or
CC      Wnt4.
CC      -1- SUBCELLULAR LOCATION: Integral membrane protein.
CC      -1- TISSUE SPECIFICITY: Expressed in eye, kidney, lung, chondrocytes,
CC      epithelial cells of the small intestine and goblet cells of the
CC      colon.
CC      -1- DEVELOPMENTAL STAGE: Expressed in the yolk sac, placenta, eye and
CC      lung bud at 9.5 days post coitum (dpc). At 10.5 dpc, also
CC      expressed in the placental blood vessel of embryonic origin.
CC      -1- DOMAIN: The fz domain is involved in binding with Wnt ligands (By
CC      similarity).
CC      -1- SIMILARITY: BELONGS TO FAMILY FZ/SMO OF G-PROTEIN COUPLED
CC      RECEPTORS.
CC      -1- SIMILARITY: CONTAINS 1 FRIZZLED (FZ) DOMAIN.

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